LISTING OF CLAIMS

1. (Currently amended) An oral contraceptive composition <u>for administration to</u> the male comprising a compound of the formula

$$\begin{array}{ccc} O & & & O \\ \parallel & & \parallel & \\ R\text{-}X\text{-}OR_1 & & \text{or} & & R\text{-}X\text{-}OR_1 \\ \parallel & & & & \\ O & & & OR_5 \end{array}$$

wherein X is P or S;

R is C₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,

O
$$R_2CO(CH_2)_n$$
, $R_3(OCH_2CH_2)_mO$ - or R_3YCCH_2C - R_4

R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or

O
$$\parallel$$
 -C(CH₂)_LCH₃ wherein L is 4 to 24;

 R_5 is H, C_1 - C_4 alkyl, phenyl or a pharmaceutically acceptable cation,

 R_2 is C_4 - C_{24} alkyl or C_4 - C_{24} alkoxy, n is 0 to 4;

 R_3 is C_4 - C_{24} alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

 R_6 is H or C_1 - C_{13} alkyl; and

Y=O or NH and a pharmaceutically acceptable carrier suitable for oral delivery.

- 2. (Previously presented) The composition of claim 1 wherein the composition is formulated as tablet or capsule.
- 3. (Previously presented) The composition of claim 1 wherein the composition is formulated as a gelcap or suspension.

4. (Previously presented) The composition of claim 1 wherein the compound has the general formula

wherein R is C₄-C₂₄ alkyl, C₄-C₂₄ alkoxy, or

and Y is 0.

5. (Previously presented) The composition of claim 4 wherein

R is C_{10} - C_{18} alkyl;

R₁ is a pharmaceutically acceptable cation or

and L is 20.

6. (Previously presented) The composition of claim 4 wherein R is

R₃ is C₄-C₂₄ alkyl; and

R₁ is a pharmaceutically acceptable cation.

7. (Previously presented) The composition of claim 1 wherein the compound has the general formula

wherein R is C₄-C₂₄ alkyl or C₄-C₂₄ alkoxy; and

 R_1 and R_5 are independently H or a pharmaceutically acceptable cation.

8. (Previously presented) The composition of claim 7 wherein $\label{eq:Rischarge} R \mbox{ is C_4-C_{24} alkoxy;}$

 R_1 is H or a pharmaceutically acceptable cation; and

R₅ is H.

9. (Previously presented) The contraceptive composition of claim 1 wherein the compound has the general formula:

wherein X is P or S;

M is a cation; and

R isC₄-C₂₄ alkyl, C₄-C₂₄ alkenyl, C₄-C₂₄ alkoxy,

$$\begin{array}{ccc} O & & & O \\ \parallel & & & \parallel \\ R_3OCCH_2CH_2\text{-} & \text{or} & & R_2CO(CH_2)_n \end{array}$$

wherein n = 2, 3 or 4;

 $R_2 = C_9 - C_{13}$ alkyl; and

 $R_3 = C_4 - C_{24}$ alkyl,

- 10. (Previously presented) The composition of claim 9 wherein X is S.
- 11. (Previously presented) The composition of claim 9 wherein the composition is formulated as tablet or capsule.
- 12. (Previously presented) The composition of claim 9 wherein the composition is formulated as a Gelcap or suspension.

- 13. (Previously presented) The composition of claim 10 wherein the cation is sodium.
- 14. (Currently amended) A contraceptive transdermal patch or implant <u>for</u> administration to the male, wherein said patch or implant comprises a composition comprising a compound of the general formula:

$$\begin{array}{ccc} O & & O \\ \parallel & & \parallel \\ R\text{-}X\text{-}OR_1 \text{ or } & R\text{-}X\text{-}OR_1 \\ \parallel & & \mid \\ O & & OR_5 \end{array}$$

wherein X is P or S;

R is C_4 - C_{24} alkyl, C_4 - C_{24} alkenyl, C_4 - C_{24} alkoxy,

R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation

wherein L is 4 to 24;

 R_5 is H, C_1 - C_4 alkyl, phenyl or a pharmaceutically acceptable cation,

 R_2 is C_4 - C_{24} alkyl or C_4 - C_{24} alkoxy, n is 0 to 4;

 R_3 , is C_4 - C_{24} alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

 R_6 is C_1 - C_{13} alkyl; and

Y = O or NH.

14. 15. (Currently amended) A method of inhibiting the capacitation of sperm cells,

said method comprising the steps of contacting in a male the sperm cells with a composition comprising a compound of the general formula:

$$\begin{array}{cccc} O & & & O \\ \parallel & & & \parallel \\ R\text{-}X\text{-}OR_1 & \text{ or } & R\text{-}X\text{-}OR_1 \\ \mid & & \mid \\ O & & OR_5 \end{array}$$

wherein X is P or S;

R is C4-C24 alkyl, C4-C24 alkenyl, C4-C24 alkoxy,

R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or

wherein L is 4 to 24;

R₅ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

 R_2 is C_4 - C_{24} alkyl or C_4 - C_{24} alkoxy, n is 0 to 4;

 R_3 is C_4 - C_{24} alkyl, m is 3 to 10;

R₄ is H, C₁-C₄ alkyl or COOR₆;

 R_6 is C_1 - C_{13} alkyl; and

Y = 0 or NH and a pharmaceutically acceptable carrier.

15. 16. (Currently amended – cancelled) The method of claim 14 wherein the step of contacting the sperm cells with the compound occurs *in vivo* in the male.

16. 17. (Currently amended) A method for inhibiting contraception, comprising

administering to a male an effective amount of a pharmaceutically acceptable cationic salt of a compound of the general formula:

$$\begin{array}{cccc} O & & & O \\ \parallel & & & \parallel \\ R\text{-}X\text{-}OR_1 & \text{ or } & & R\text{-}X\text{-}OR_1 \\ \parallel & & & \mid \\ O & & & OR_5 \end{array}$$

wherein X is P or S;

R is C_1 - C_4 alkyl, C_4 - C_{24} alkenyl, C_4 - C_{24} alkoxy,

$$\begin{array}{c} O \\ \parallel \\ R_2CO(CH_2)_n - \end{array} \quad , \quad \begin{array}{c} O \\ \parallel \\ R_3(OCH_2CH_2)_mO - \end{array} \quad \text{or} \quad \begin{array}{c} O \\ \parallel \\ R_3YCCH_2C - \\ \parallel \\ R_4 \end{array}$$

R₁ is H, C₁-C₄ alkyl, a pharmaceutically acceptable cation or

wherein L is 4 to 24;

R₅ is H, C₁-C₄ alkyl, phenyl or a pharmaceutically acceptable cation,

 R_2 is $C_4\hbox{-} C_{24}$ alkyl or $C_4\hbox{-} C_{24}$ alkoxy, n is 0 to 4;

 R_3 is C_4 - C_{24} alkyl, m is 3 to 10;

 R_4 is H, C_1 - C_4 alkyl or $COOR_6$;

R₆ is C₁-C₁₃ alkyl;

Y = 0 or NH.

 $\frac{17. \ 18.}{18.}$ (Currently amended) The method of claim $\frac{16}{17}$ wherein the composition is administered orally in a daily dosage form.

18. 19. (Currently amended) The method of claim 16 17 wherein the composition. is

administered transdermally or subcutaneously to maintain constant systemic levels. for an extended time period.